REMARKS

I. Status of the Claims

Claims 1-57 were pending at the time of the Action. Claims 1-41, 48-53, 56 and 57 are withdrawn as being directed to a non-elected invention. Applicants traverse the of the restriction requirement dated September 28, 2006 as it pertains to Groups I, IV, V, and VI. Applicants file concurrently with this paper a petition for reconsideration of the restriction requirement dated September 28, 2006. Claim 49 is canceled. Applicants reserve the right to pursue the subject matter of claim 49 in a divisional or continuing application. Claims 42, 45, and 46 are amended. Claims 58-72 are added. Therefore, claims 42-47, 54, 55, and 58-72 are pending.

Support for amended and added claim language is found throughout the specification and claims as originally filed as follows.

Support for "to an alcohol concentration of about 35% to about 70%" is found, for example, at page 8, lines 19-21; at page 11, lines 20-21; and at claims 48 and 52 as originally filed.

Support for language of added claims 58-72 is found, for example, in claims 21-25, 29, 46, and 48 as originally filed; at page 30, lines 8-10; page 33, lines 1-3; at page 35, lines 24-26.

In light of support cited in the claims as originally filed and as found in the specification, Applicants submit that no new matter has been introduced by the amended or added claims.

II. Claim 45 Satisfies 35 U.S.C. §112, Second Paragraph

The Action rejects Claim 45 under 35 U.S.C. §112, second paragraph, for lack of antecedent basis for the term "the eluted sample." In light of the pending claims the rejection is moot. Pending claim 45 depends from Claim 42. Claim 45 has been amended to substitute "siRNA or miRNA" for the term "sample," which term has support in Claim 42. Applicant therefore respectfully requests that the rejection under 35 U.S.C. §112, Second Paragraph, be withdrawn.

III. Claims 42-47, 54, 55, and 58-72 are Non-obvious Under 35 U.S.C. §103

Claims 42-47 and 54-55 are rejected as being unpatentable over Laugharn *et al.* (U.S. Patent No. 6,111,096 ("the '096 patent") in view of RNA STAT-60 Reagent pages 1-4 (http://www.isotexdiagnostics.com/rna_stat-60_reagent.html), in further view of Moss ("RNA interference: It's a small RNA world." *Current Biology* 11(19):R772-R775, 2001 (Moss)) and Ambros ("MicroRNAs: Tiny Regulators with Great Potential" *Cell* 107:823-826, 2001 (Ambros)). See Office Action at pages 3-6. Applicant respectfully traverse.

To establish a *prima facie* case of obviousness, three basic criteria must be met. First, the prior art reference (or references when combined) must teach or suggest all the claim limitations. Second, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Finally, there must be a reasonable expectation of success. The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, and not based on applicant's disclosure. *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991). See MPEP §2142.

The '096 patent fails to provide (a) one of skill in the art with an expectation of success and (b) motivation or suggestion to modify the cited references. The '096 patent requires the use of hyperbaric or hydrostatic pressure, *i.e.*, increased pressure. The '096 patent states in column 1 starting at line 41:

> The invention is based on the discovery that hyperbaric, hydrostatic pressure reversibly alters the partitioning of nucleic acids between certain absorbed and solvated phases relative to partitioning at ambient pressure.

In the absence of increased pressures one of skill in the art would have no expectation that the currently claimed method would successfully be used to isolate small RNAs. Furthermore, the

additional requirement of increased pressure would not have lead one of skill in the art to modify the '096 patent in such a way as to obviate the claimed invention. The '096 patent teaches away from the claimed invention and is an improper reference because the '096 patent describes increased pressure as an essential element of the method described. Applicants respectfully request the withdrawal of the rejection.

A. Laugharn *et al.* and the RNA STAT-60™ procedure

Furthermore, all elements of the claimed invention are not described by the '096 patent or any combination of the cited references. For instance, lines 16-21 of column 18 of the '096 patent states:

> . . . the leukocyte pellet is resuspended in 350 µl leukocyte lysis solution (LLS; containing 4 M guanidinium isothiocyanate, 0.1 M β-mercaptoethanol, 10 mM sodium citrate pH 7.0, 0.5 M lauryl sarcosine, and 2.0% Triton-X100). The tube is vortexed vigorously prior to addition of 350 µl of 64% ethanol.

The addition of 350 µl of 64% ethanol to 350 µl of lysis solution dilutes the ethanol by a factor of two. Therefore, the resulting ethanol concentration of the mixture is 32%, a value that falls outside of the range recited in the pending claims.

Additionally, lines 32-33 of column 16 of the '096 patent states:

> . . . 1 ml RNA STAT-60™ (Tel-test, Inc., Friendswood, Tex.) was added directly to the cells. After incubating at room temperature for 5 minutes, the cells were scraped from the plate, homogenized by pipetting, and transferred to a sterile microcentrifuge tube. After addition of 0.2 ml chloroform, the solution was mixed vigorously for 15 seconds and the upper aqueous phase was separated by centrifugation. Following precipitation of the RNA with isopropanol, the RNA was pelleted by centrifugation in a microcentrifuge.

At page 2 of the "RNA STAT-60™" protocol section 5, step 3 states use of 0.5 volume of isopropanol for precipitation of RNA. Addition of 0.5 volume of isopropanol results in a concentration of at most 33% isopropanol (assuming 100% isopropanol), a value that falls outside of the range recited by pending claims. Therefore, the '096 patent in combination with the RNA STAT-60™ procedure do not teach or suggest the claimed invention.

B. Moss, Ambros and the Combination of Laugharn *et al.*, *RNA STAT-60™*, Moss and Ambros

Moss and Ambros are cited for providing the length of miRNA and siRNA of about 22 bp. Moss and Ambros do not remedy the deficiency of the '096 patent in combination with RNA STAT-60™ in that Moss and Ambros provide no further teaching or suggestion regarding a method for isolating small RNA molecules.

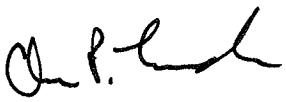
For at least these reasons, Applicant respectfully asserts that the Office Action has not established a *prima facie* case of obviousness.

CONCLUSION

Applicants believe that the present document is a full and complete response to the Action dated January 5, 2007. The present case is in condition for allowance, and such favorable action is requested.

The Examiner is invited to contact the undersigned at (512) 536-3035 with any questions, comments, or suggestions relating to the referenced patent application.

Respectfully submitted,



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Date: April 5, 2007